



## POSITION DUTY STATEMENT

<b>NAME</b>	<b>MCR</b> I
<b>CLASSIFICATION</b> Precision Electronics Specialist	<b>POSITION NUMBER</b> 538-103-6926-005
<b>WORKING TITLE</b> Seismic Instrumentation Specialist	<b>DIVISION/UNIT</b> CGS/Earthquake Engineering Program
<b>EFFECTIVE DATE</b>	<b>LOCATION</b> Sacramento
<b>BARGAINING UNIT</b> R09	<b>CONFLICT OF INTEREST CATEGORY</b> N/A

**GENERAL STATEMENT:** Under the supervision of the Senior Precision Electronics Specialist the Precision Electronics Specialist, utilizing an in-depth knowledge and understanding of the principles of precision electronic equipment (including accelerographic and data communications systems), is responsible for, but not limited to, seismologic and data communications technical research; system design; specification development; calibration; experimentation; testing; validation; integration; and performing special studies on technologically complex seismologic systems in support of the Earthquake Engineering Program (EEP) in the Department of Conservation's California Geological Survey. Duties include, but are not limited to:

A. **SPECIFIC ACTIVITIES: ESSENTIAL / MARGINAL FUNCTIONS**

- **ESSENTIAL FUNCTIONS**

- **40% Special Studies**

Performs special studies to test and evaluate performance characteristics of new seismologic equipment; develops specifications and designs seismologic systems, including calibrating, testing, validating, and integrating new, or modifying existing instruments, equipment and technology into the EEP network of strong earthquake shaking recorders, and develops standards and procedures for their implementation and usage. Also plans, schedules, and leads the installation of technologically advanced, complex instrumentation systems at sites throughout the state. Monitors the work of installation technicians to ensure accuracy and compliance with SMIP procedures, existing or newly-developed scientific methods and procedures, and accepted scientific standards. Performs site visits before, during, and after field installations to ensure correct project installation has occurred, providing consultation, assistance and problem resolution to the more complex installations, and prepares a synopsis of project-related issues to management staff.

- **40% Network and Equipment Upgrade**

Responsible for the development and performance of EEP network equipment upgrade and installation procedures to resolve complex technical problems or as necessitated by changing EEP, scientific or manufacturer standards or requirements including, but not limited to, analyzing symptoms, proto-typing, testing, and solutions. Assists in coordinating the network-wide instrument rework efforts of field functions to ensure a

unified programmatic approach in the resolution of seismologic operational problems and meeting instrumentation objectives.

- **15% Training and Quality Assurance**

Provides training, leadership and oversight to lower-level technicians with regard to the operation, repair, calibration and installation of new or modified accelerographic and data communications systems; develops equipment integration methods and procedures; and writes specialized scientific reports. Responsible for developing and performing quality assurance tests and inspections of routine incoming accelerographic instruments and electronic equipment to verify proper operation, calibration and quality of workmanship; testing includes detailed visual review, electronic circuitry tests, static calibration tests, other tests, as appropriate; and follow-up analysis and reporting of findings and outcome.

- **MARGINAL FUNCTIONS**

- **5% Administrative**

Performs administrative duties including, but not limited to: adheres to Department policies, rules and procedures; submits administrative requests including leave, overtime, travel, and training in a timely and appropriate manner; accurately reports time in the Tempo timekeeping system; and submits timesheets by the due date. Assists other EEP activities with the collection, archival and dissemination of post-earthquake products including processing digital records and entering them into the archival system.

B. **SUPERVISION RECEIVED**

The Precision Electronics Specialist reports to the Senior Precision Electronic Specialist with occasional direction and assignments from other senior EEP staff.

C. **SUPERVISION EXERCISED**

NONE

D. **ADMINISTRATIVE RESPONSIBILITIES FOR SUPERVISORS AND MANAGERS**

NONE

E. **PERSONAL CONTACTS**

Interfaces with other EEP staff, equipment manufacturers, property representatives, data communications and power service providers, Caltrans employees, hospital staff and various inspectors to coordinate and facilitate the testing, installation, repair and maintenance of EEP equipment.

F. **ACTIONS AND CONSEQUENCES**

Sub-standard job performance or errors in work may prevent critical earthquake shaking data from being recorded and/or compromise the integrity of the recorded data. Using safe work practices are critical to the prevention of injury to one's self and others as well as damage to equipment. Poor planning and preparation for the work will increase the cost in time and materials.

**G. WORKING CONDITIONS/PHYSICAL REQUIREMENTS**

- Work in an office environment sitting at a desk during core office hours using a desktop computer, keyboard, mouse, monitor, printers and scanners under non-natural lighting for prolonged periods of time.
- Moving about the office and standing or sitting during in person meetings.
- Bending and stooping to retrieve and replace files and records.
- Use of multi-line telephone console or a cordless telephone.
- Work in a high rise building.
- Travel throughout the state (via driving a truck/van and/or commercial flights).
- Occasional overtime and non-standard work hours.
- Ability to move and/or transport at least 40 pounds over irregular terrain for at least 100 yards.
- Work at heights (using fall prevention equipment with ladders and lifts), on roadway shoulders, and in enclosed spaces (such as inside bridge box girders).
- Uses desktop and laptop PCs to control, retrieve and analyze data from digital accelerographic systems through direct connections, radio or telephone modems.
- Uses industry standard electronic test equipment to troubleshoot, repair and calibrate accelerographic and data communications systems.
- Must safely use hand and power tools common in construction trades and work both indoors and outdoors.

**H. OTHER INFORMATION**

- Exercises sound judgment in analyzing situations and making logical decisions.
- Ability to read and interpret electronic schematics and mechanical diagrams, maintain records and make reports.
- Demonstrates attention to detail and communicates effectively working as a member of a team or alone.
- Aware of and adheres to safe physical and electrical work practices.
- Possession of a valid California Driver's License.
- Telework may be available for this position in accordance with the Department of Conservation's Telework Policy and procedures.
- All employees are responsible for contributing to an inclusive, safe, and secure work environment that values diverse cultures, perspectives, and experiences, and is free from discrimination.

I have read and understand the duties listed above and I can perform these duties with or without reasonable accommodation (if you believe reasonable accommodation is necessary, discuss your concerns with your supervisor).

<b>Employee Signature</b>	<b>Employee Printed Name</b>	<b>Date</b>
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I have discussed the duties of this position with and have provided a copy of this duty statement to the employee named above.

<b>Supervisor Signature</b>	<b>Supervisor Printed Name</b>	<b>Date</b>
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